

Date Out: EFB: DEC 2 1981

FILE COPY

To: Product Manager 12 Ellenberger
TS-767

From: Dr. Willa Garner III
Chief, Review Section No. 1
Environmental Fate Branch

Attached please find the environmental fate review of:

Reg./File No.: 464-448, 464-523

Chemical: Chlorpyrifos

Type Product: Insecticide

Product Name: Lorsban

Company Name: Dow

Submission Purpose: Add soybeans to label

ZBB Code: 3(c)(7)

ACTION CODE: 335

Date in: 10/19/81

EFB # 16, 17

Date Completed: DEC 2 1981

TAIS (level II)

Days

Deferrals To:

63

1

_____ Ecological Effects Branch

_____ Residue Chemistry Branch

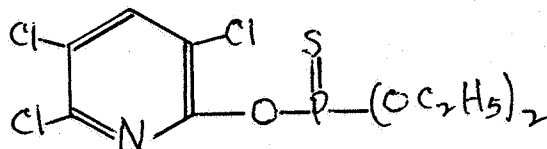
_____ Toxicology Branch

1.0 Introduction

Chemical Name and Type Pesticide: chlorpyrifos, O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate, 40.7% ai, Insecticide.

Trade Name: LORSBAN 4E, LORSBAN 15G

Chemical Structure:



The registrant requests the addition of soybeans to the LORSBAN 4E label. This formulation is currently registered for use on certain field, fruit, nut, and vegetable crops.

2.0 Directions for Use

See attached pages

3.0 Discussion of Data

No new environmental fate data submitted

4.0 Recommendation

EFB concurs with the proposed addition of soybeans to the LORSBAN 4E and 15G labels, since no significant incremental risk should be associated with this use.

Herbert L. Manning
Herbert L. Manning, Ph.D.
Review Section #1
EFB/HED

LORSBAN 15G
Proposed Labeling
Revised October 14, 1980



LORSBAN* 15G
GRANULAR INSECTICIDE

For Control of Certain Insects Infesting
Field Corn, Soybeans, Sugar Beets, and Sweet Potatoes

CAUTION: KEEP OUT OF REACH OF CHILDREN
Read Complete Precautions on Side Panel } In proper
type size

ACTIVE INGREDIENT:

Chlorpyrifos [O,O-diethyl O-(3,5,6-trichloro-
2-pyridyl)phosphorothioate] 15.0%

INERT INGREDIENTS: 85.0%

EPA Registration No. 464-523

EPA Est. 464-MI-1

In case of an emergency endangering life or
property involving this product, call collect
517-636-4400

AGRICULTURAL CHEMICAL
Do Not Ship or Store with Food, Feeds,
Drugs or Clothing

PRECAUCION AL USUARIO: Si usted no lee inglés, no use este producto hasta que
la etiqueta le haya sido explicada ampliamente.

TRANSLATION: (TO THE USER: If you cannot read English, do not use this product
until the label has been fully explained to you.)

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a
manner inconsistent with its labeling.

LORSBAN 15G
Proposed Labeling
Revised October 14, 1980

Field Corn: To control larvae of northern and western corn rootworms apply LORSBAN 15G granular insecticide at planting time as a band (row) treatment at the rate of 6 to 8 ounces per 1,000 feet of row. Equivalent rates of LORSBAN 15G per acre for various row spacing are given in the accompanying table. Incorporate the granules into the top 1 inch of soil by placing in a 6 to 7 inch wide band over the row behind the planter shoe and ahead of the press wheels. *Do not make more than one application per season.*

Amount of LORSBAN 15G Per 1000 Feet of Row	Pounds of LORSBAN 15G Required Per Acre for Various Row Spacing					
	40"	38"	36"	34"	32"	30"
6 ounces	5.0	5.25	5.5	5.75	6.0	6.5
8 ounces	6.5	7.0	7.25	7.75	8.25	8.75

NOTE (Cutworm Control): Use of LORSBAN 15G at the rate of 8 ounces per 1000 feet of row also will control moderate to low infestations of cutworms. In cases of severe infestation, however, enough cutworms outside the treated band may survive to cause crop damage. If this situation occurs, it may be necessary to apply a rescue treatment to control the surviving worms. Consult your State Agricultural Experiment Station or Extension Service specialist for further information concerning insecticides registered for this purpose.

Soybeans: Use LORSBAN 15G to control larvae of the lesser cornstalk borer by application at planting time or postemergence as a band (row) treatment at the rate of 8 ounces per 1,000 feet of row. Equivalent rates of LORSBAN 15G per acre for various row spacings are given in the accompanying table. When used at planting, incorporate the granules into the top 1 inch of soil by placing in a 6 to 7

inch wide band over the row behind the planter shoe and ahead of the press wheels. For postemergent treatment incorporate the granules in a 6 to 7 inch wide band to a depth of 1/2 inch to 1 inch using a suitable cultivator. Apply LORSBAN 15G with equipment that will provide uniform distribution of the granules. *Do not make more than one application per season. Do not feed treated soybean forage or hay to meat or dairy animals.*

Sugar Beets: Use LORSBAN 15G to control larvae of the sugarbeet root maggot by application as a row treatment at planting time or postemergence (up to the 2 to 4 true leaf stage of the plant). Apply the granules at the rate of 6.5 to 9 ounces per 1,000 feet of row (equivalent to 10 to 13.5 pounds per acre based on a 22 inch row spacing) by placing in a 5 to 7 inch wide band over the drill row (at planting) or plants (postemergence). When used at planting, the granules may be applied either ahead of the planter shoe and the seed drilled in the center of the band or behind the planter over the drill row. Incorporate the granules to a depth of 1 to 2 inches with either method. For postemergent treatment incorporate the banded granules to a depth of 1/2 inch to 1 inch using a suitable cultivator. Apply LORSBAN 15G with equipment that will provide uniform distribution of the granules. *Do not make more than one application per year.*

Sweet Potatoes: Use LORSBAN 15G as an aid to reduction of feeding damage by larvae of *Conoderus* wireworms, *Systema* flea beetles and sweetpotato flea beetle by preplant, broadcast application at the rate of 13.5 pounds per acre, using equipment that will evenly distribute the granules over the treated area. After application, incorporate the granules into the soil to a depth of 4 to 6 inches using a rotary hoe, disc cultivator, or other suitable incorporation equipment. Plant the crop in the usual manner as soon as possible after treatment. *Do not make more than one application per season.*

LORSBAN 4E
Proposed Labeling
Revised October 14, 1980



LORSBAN* 4E

INSECTICIDE

*For Control of Various Insects Infesting Certain
Field, Fruit, Nut, and Vegetable Crops*

**Complete Directions for Use, Use Precautions and Restrictions,
Hazards and Other Important Information
For the Proper Use, Handling, Storage and Disposal of this Product**

D479

* Trademark of THE DOW CHEMICAL COMPANY

EPA Reg. No. 488-448
EPA Est. No. 488-MI-1

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CONTENTS

Soybeans

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada amablemente.

TRANSLATION: (TO THE USER: If you cannot read English, do not use this product until the label has been fully explained to you.)

In case of an emergency endangering life or property involving this product, call collect 517-536-4400.

ACTIVE INGREDIENTS:

Chlorpyrifos (O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate)	40.7%
Aromatic petroleum derivative solvent	22.8%

INERT INGREDIENTS:36.5%
Contains 4 pounds of chlorpyrifos per gallon

HAZARDS
KEEP OUT OF REACH OF CHILDREN
WARNING

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND
DOMESTIC ANIMALS

MAY BE FATAL IF SWALLOWED
MAY BE ABSORBED THROUGH
SKIN • MAY BE INJURIOUS
TO EYES AND SKIN

Do Not Take Internally • Do Not Get
in Eyes, on Skin or on Clothing
Avoid Breathing Vapors and
Spray Mist

Wash Thoroughly After handling
In case of contact, immediately flush con-
taminated eyes with plenty of water and
get prompt medical attention. Promptly
wash contaminated skin with soap and
plenty of water. Wash contaminated
clothing before reuse.

NOTE TO PHYSICIAN: Chlorpyrifos is a
 cholinesterase inhibitor. Treat symp-
 tomatically. ~~Atropine is an antidote.~~

Physical and Chemical hazards
COMBUSTIBLE

Do Not Use or Store Near Heat
or Open Flame • Do Not Cut or
Weld Container

Atropine only by injection
 is an antidote.

In case of an emergency endangering
life or property involving this
product, call collect
517-636-4400

AGRICULTURAL CHEMICAL
Do Not Ship or Store with Food, Feeds,
Drugs or Clothing

Environmental

This product is highly toxic to bees ex-
 posed to direct treatment or residues on
 crops. Avoid use when bees are actively
 foraging. Protective information may be
 obtained from your Cooperative Agri-
 cultural Extension Service.

LORSBAN 4E insecticide is toxic to fish,
 birds and other wildlife. Fish and crusta-
 ceans may be killed if their waters are
 contaminated with this product. Keep out
 of lakes, streams, ponds, tidal marshes
 and estuaries. Do not apply where runoff is
 likely to occur. Do not apply when weather
 conditions favor drift from treated areas.
 Do not contaminate water by cleaning of
 equipment or disposal of wastes. Use this
 product only as specified on this label.

DIRECTIONS FOR USE

It is a violation of federal law to use this
 product in a manner inconsistent with its
 labeling.

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SOYBEANS: Use LORSBAN 4E for control of the following pests at the dosages indicated:

Lesser cornstalk borer . . . 4 pints
per acre
(at planting or postemergence in a
6 to 10 inch wide band followed by
light incorporation);

. . . 2 pints
per acre
(at cracking in a 6 to 10 inch wide
band followed by a second spray 5
days after the initial treatment);

Cutworms, European corn borer,
corn earworm, southern green
stink bug. 2 pints
per acre

Bean leaf beetle 1 to 2 pints
per acre

Mexican bean beetle,
armyworms. 1 to 1 1/2
pints
per acre

Velvetbean caterpillar, green
cloverworm 1/2 to 1
pint
per acre

(as a broadcast, foliar spray
using ground or aerial equipment
when field counts indicate dama-
ging insect populations are
developing or present; re-treat
as necessary to maintain control).

Mix the required dosage in enough water
to ensure thorough coverage.

Restrictions: Do not apply more than
10 pints of LORSBAN 4E per acre or 5
pounds of chlorpyrifos (active
ingredient) per acre per season. Do
not apply within 28 days before harvest.
Do not feed treated soybean forage or
hay to meat or dairy animals.

Restrictions: Make only one application
during the dormant season. Do not allow
meat or dairy animals to graze in treated
orchards.

SWEET POTATOES: Use LORSBAN 4E to
control *Conoderus* wireworms, *Systema*
flea beetles, and the sweet potato flea
beetle by preplant application at the rate
of 4 pints per acre as a broadcast (overall)
spray to the soil surface followed by incor-
poration. Mix the specified dosage with
enough water to obtain uniform coverage
of the treated area and apply as a coarse
spray using suitable ground spray equip-
ment. After application, incorporate the
insecticide into the soil to a depth of 4 to 6
inches using a rotary hoe, disc cultivator,
or other suitable incorporation equip-
ment. Plant the crop in the usual manner
as soon as possible after treatment.

Restrictions: Do not make more than one
application per season.

STORAGE AND DISPOSAL

Storage: Keep away from food, feedstuffs,
and domestic water supplies. Handle con-
centrate in a ventilated area. Keep con-
tainer closed.

Disposal: Do not reuse empty container
for any purpose. Promptly crush or perfor-
ate and bury with wastes in a location away
from water supplies. Follow official local
pesticide container disposal regulations
where applicable.

ATTENTION:

Do Not Cut or Weld Container

NOTICE: Seller warrants that the product
conforms to its chemical description and
is reasonably fit for the purposes stated on
the label when used in accordance with
directions under normal conditions of
use, but neither this warranty nor any
other warranty of MERCHANTABILITY or
FITNESS FOR A PARTICULAR PURPOSE,
express or implied, extends to the use of
this product contrary to label instructions,
or under abnormal conditions, or under
conditions not reasonably foreseeable to
seller, and buyer assumes the risk of any
such use.